

Message Text

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ACTION EB-08

INFO OCT-01 NEA-10 ISO-00 COM-02 SOE-02 AID-05 CEA-01
CIAE-00 DODE-00 H-01 INR-10 INT-05 L-03 NSAE-00
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R 070830Z JUL 78
FM AMEMBASSY RABAT
TO SECSTATE WASHDC 6003
USDOE WASHDC

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DOE FOR SIEVERING

DOE ALSO PASS LARAMIE ENERGY TECHNOLOGY CENTER FOR DECORA

DEPARTMENT ALSO FOR AID

E. O. 11652: N/A
TAGS: TECH EMIN ETRD MO
SUBJ: VISOT OF DOE OIL SHALE TEAM

1. DURING INTENSIVE JUNE 26-JULY 1 VISIT TO MOROCCO,
DOE OIL SHALE TEAM HELD DETAILED DISCUSSION WITH GOM
MINISTER OF ENERGY AND MINES MOUSSA SAADI AT BEGINNING
AS WELL AS END OF VISIT. TEAM ALSO CONFERRED WITH
PRINCIPAL MINISTRY MINING AND ENERGY OFFICIALS, BRPM
DIRGEN ABDERRAFIH GUESSOUS, OTHER BRPM SPECIALISTS IN
OIL SHALE FIELD, ONE DIRGEN AHMED TAZI AND HIS PRINCIPAL
ASSISTANTS IN CASABLANCA, AMBASSADOR ANDERSON AS WELL
AS EMBASSY AND CONGEN CASABLANCA E/C OFFICERS. SOCIAL
OCCASIONS HOSTED RESPECTIVELY BY GOM, EMBASSY E/C
COUNSELOR AND CONGEN CASA COMATT OFFERED FURTHER
OPPORTUNITY TO MAKE CONTACTS AND REVIEW SUBSTANTIVE
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PROBLEMS IN LESS FORMALISTIC ATMOSPHERE. FINALLY,
TEAM MADE FULL-DAY VISIT TO TIMHADIT DEPOSIT AND LATER
EXAMINED CORE SAMPLES OF TARFAYA DEPOSIT IN RABAT.
USDOE TEAM CONSISTED OF DR. A. W. DECORA, DIRECTOR
OF DOE'S LARAMIE ENERGY TECHNOLOGY CENTER; J. W.
SMITH, RESOURCE GEOLOGIST; AND R. A. MARTEL, CHEMICAL
PROCESS ENGINEER, BOTH OF THE SAME ORGANIZATION.

2. IN TWO-HOUR KICK-OFF SESSION JUNE 26, MOUSSA SAADI SET TONE OF WARM WELCOME, OPENNESS ON SUBSTANCE AND WILLINGNESS TO SHARE ALL INFO GOM HAD THUS FAR ACCUMULATED ON MOROCCAN OIL SHALE DEPOSITS. HE ALSO EXPRESSED DESIRE FOR TEAM'S FRANK AND UNBIASED JUDGMENTS, A THEME PICKED UP REPEATEDLY DURING SUBSEQUENT DISUCSSIONS. QUESTIONS UPPERMOST IN GOM'S MIND, AND ON WHICH THEY EXPELICITLY SOUGHT TEAM'S VIEWS, WERE

-- WAHT DO US EXPERTS THINK OF MOROCCAN OIL SHALE DEPOSITS IN GENERAL?

-- WHAT IS THEIR VIEW ON RESERACH WORK CONDUCTED THUS FAR UNDER AUSPICES OF BRPM?

-- HOW SHOULD GOM MOVE FORWARD IN THE FUTURE ON OIL SHALE QUESTION?

-- WHAT SPECIFIC IMPLEMENTING STEPS WOULD DOE TEAM ADVISE?

ALTHOUGH NOT EXPLICITLY STATED AS SUCH, BUT CLEARLY AN UNDERLYING THEME TO LAST POINT, WAS QUESTION: HOW COULD USG (AND DOE SPECIFICALLY) HELP OUT?

3. AFTER REVIEWING EXTENSIVE DOCUMENTATION; VISITING TIMHADIT DEPOSIT AND EXAMING SELECTED CORE SAMPLES OF TARFAYA DEPOSIT, DOE TEAM PRESENTED COMPREHENSIVE RESPONSES TO GOM QUESTIONS OUTLINED ABOVE. THESE LIMITED OFFICIAL USE

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WERE CONVEYED TO MEM AND BRPM OFFICIALS DURING LAST DAY'S WRAP-UP MEETINGS AND AMPLIFIED IN GREATER DETAIL DURING FINAL SESSION WITH MOUSSA SAADI. MAIN POINTS OF TEAM'S RESPONSE, WHICH WERE OFFERED THROUGHOUT AS PRELIMINARY AND THE RESULT OF A BRIEF, ONE WEEK'S REVIEW, WERE AS FOLLOWS: IN TEAM'S CONSIDERED VIEW, MOROCCO POSSESS VERY INTERESTING AND IMPORTANT DEPOSITS OF OIL SHALES AT TIMHADIT AND TARFAYA. IN TEAM'S VIEW, EXPLOITATION OF THESE DEPOSITS SHOULD BE FAVORABLY CONSIDERED AS AN IMPORTANT MEANS FOR ENLARGING MOROCCO'S ENERGY RESOURCES. TEAM CONCURRED WITH CONCLUSTIONS OF GOM OFFICIALS THAT EXPLOITATION OF THIS IMPORTANT NATIONAL RESOURCE WOULD CONTRIBUTE TO (A) FOREIGN EXCHANGE SAVINGS; (B) SECURITY OF SUPPLY, AND (C) ADDED EMPLOYMENT OPPORTUNITIES FOR LOCAL MOROCCAN LABOR.

4. TEAM ALSO NOTED THAT SCIENTIFIC TECHNICAL AND ECONOMIC ANALYSES THUS FAR UNDERTAKEN BY BRPM WERE SYSTEMATIC, BALANCED AND ESPECIALLY IMPRESSIVE FROM PROFESSIONAL STANDPOINT. IN SHORT PERIOD OF FOUR YEAR, BRPM HAS GAINED CONSIDERABLE INSIGHT INTO THE AVAILABLE TECHNOLOGIES AND THEIR POTENTIAL APPLICATION TO TIMHADIT.

5. WHILE AGREEING THAT GOM SHOULD MOVE FORWARD ON FURTHER DEVELOPMENT OF OIL SHALE RESOURCE, TEAM DREW ATTENTION TO FACT THAT ALL PRESENT OIL-SHALE TECHNOLOGIES ARE EMBRYONIC, AND THAT THERE HAS NOT BEEN A DEMONSTRATION OF ANY TECHNOLOGY ON A TRUE INDUSTRIAL SCALE ANYWHERE IN THE WESTERN WORLD. THERE EXISTS A LACK OF CRUCIAL SCALE-UP AND OPERATING DATA, TEAM STRESSED, WHICH WILL HAVE AN IMPORTANT BEARING ON THE TYPE OF TECHNOLOGY TO BE SELECTED AND THE CONFIGURATION OF THE OVERALL OPERATION. GIVEN THESE CAVEATS, BUT AGAIN DRAWING ON THEIR FAVORABLE OVERALL REACTION NOTED ABOVE, TEAM MADE FOLLOWING SPECIFIC RECOMMENDATIONS.

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6. CONSIDERATION SHOULD BE GIVEN FOR APPLYING THE VERTICAL MODIFIED IN SITU TECHNOLOGY TO THE TIMHADIT DEPOSITS, SUPPLEMENTED BY ABOVE-GROUND PROCESSING OF THE APPROXIMATELY 20 PER CENT OR LESS OIL SHALE WHICH IS REMOVED FROM THE ROOM VOLUME OF THE IN SITU PROCESS. SERIOUS CONSIDERATION SHOULD BE GIVEN TO UNDERTAKING AT THE EARLIEST OPPORTUNE MOMENT A RESEARCH PROGRAM AT TIMHADIT TO TEST THE APPLICABILITY OF THIS TECHNOLOGY TO THE DEPOSIT. APPROPRIATE ANCILLARY RESEARCH IN ROCK MECHANICS AND MINING RESEARCH SHOULD ALSO BE UNDERTAKEN.

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7. CONCURRENTLY, THE SELECTION OF AN ABOVE-GROUND PROCESSING TECHNOLOGY SHOULD BE BEGUN BY, PERHAPS, A COMPETITIVE BIDDING PROCESS TO SECURE COMMITMENTS FROM A COMPANY WITH DEMONSTRATED TECHNOLOGY. THE SELECTION PROCESS SHOULD INCLUDE ARRANGEMENTS FOR THE COMPANY TO ASSIST IN ENGINEERING DEVELOPMENT AND OPERATION OF A QUOTE FULL SCALE MODULE UNQUOTE OF APPROXIMATELY 7000 BBL/DAY. TEAM STRESSED THAT WHILE SEVERAL SURFACE PROCESSING TECHNOLOGIES WERE AVAILABLE AND OF DEMONSTRATED EFFECTIVENESS, NONE WAS WITHOUT ITS PROBLEMS AND DISADVANTAGES. ON THE OTHER HAND, NONE WAS IN ANY WAY A QUOTE LOSER UNQUOTE, AND THE SELECTION OF ANY ONE OF THEM WOULD DEFINITELY NOT TURN OUT TO BE A POOR DECISION. THE BEST APPROACH, TEAM FELT, WAS TO PROCURE THE PROCESS WHOSE SUPPLIER OFFERED THE BEST COMMERCIAL DEAL TO MOROCCO. IN TEAM'S VIEW THE ESTIMATED COST OF A COMBINED FACILITY AS DESCRIBED ABOVE WOULD BE APPROXIMATELY 80-90 MILLION US DOLLARS FOR CONSTRUCTION, PLUS 15-20 MILLION DOLLARS FOR OPERATING COSTS PER YEAR.

8. WITH RESPECT TO THE TARFAYA DEPOSIT, CONSIDERATION
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SHOULD BE GIVEN TO EXPLOITING THE RESOURCE BY A MODIFIED HORIZONTAL IN SITU PROCESS KNOWN AS QUOTE SURFACE UPLIFT UNQUOTE. STRESSING THE EXPERIMENTAL CHARACTER OF THIS TECHNOLOGY, AND NOTING THAT OBSERVATION OF TARFAYA CORE SAMPLES HAD LED TO A SLIGHT MODIFICATION IN TEAM'S INITIAL POSITIVE REACTION, CONCLUSION WAS NEVERTHELESS THAT WHILE THERE MIGHT BE PROBLEMS DUE TO THE FRACTURING CHARACTERISTICS OF THE TARFAYA SHALE, SUCH PROBLEMS WERE IN NO WAY INSURMOUNTABLE.

9. TURNING TO NEXT STEPS IN US/MOROCCAN COOPERATIVE UNDERTAKINGS IN OIL SHALE, TEAM OFFERED FOLLOWING PROPOSALS TO PROMOTE TECHNICAL INTERCHANGE, SUBJECT TO REVIEW AND APPROVAL OF DOE HEADQUARTERS OFFICIALS.
A. LARAMIE ENERGY TECHNOLOGY CENTER WOULD BE PREPARED TO OFFER ITS FACILITIES AND TECHNICAL EXPERTISE IN PERFORMING A DETAILED QUOTE MINERALOGICAL PROFILE ANALYSIS UNQUOTE OF A REPRESENTATIVE MOROCCAN OIL SHALE CORE. THIS WORK COULD BEGIN IMMEDIATELY.
B. BENEFICIAL TECHNOLOGIC INTERCHANGE CAN BE OBTAINED BY A SEVERAL MONTH'S ASSIGNMENT OF PERHAPS TWO MOROCCAN ENGINEERS TO THE LARAMIE ENERGY TECHNOLOGY CENTER.

TEAM WOULD BE PREPARED TO PUT FORWARD THIS PROPOSAL SHOULD THE GOM BE INTERESTED.

C. USDOE SCIENTISTS AND ENGINEERS MIGHT ASSIST IN AN ENGINEERING DESIGN OF MODIFIED IN SITU EXPERIMENTS. THIS MIGHT INCLUDE VISIT OF US GOVERNMENT SCIENTISTS AND ENGINEERS TO MOROCCO.

10. ALL GOM OFFICIALS EXPRESSED APPRECIATION FOR TEAM'S RECOMMENDATIONS AND WARMLY WELCOMED OFFERS OF FURTHER COOPERATION. MOUSSA SAADI SPOKE FEELINGLY IN SAME VEIN. ACCEPTING FORTHWITH TEAM'S OFFERS FOR FUTURE LIMITED OFFICIAL USE

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COOPERATION, HE STRESSED SPIRIT OF OPENNES AND FRANK NATURE OF INTERCHANGE CHARACTERISING ENTIRE VISIT. IN THAT SENSE, TEAM'S VISIT WAS FURTHER REFLECTION OF UNUSULLY FRIENDLY, OPEN AND HIGHLY PRODUCTIVE VISIT HE HIMSELF HAD MADE TO THE US. MOREOVER, SAADI WENT ON, TEAM'S VISIT WAS FIRST CONCRETE DEMONSTRATION OF SECRETARY SCHLESINGER'S REMARKS TO SAADI IN WASHINGTON, DURING WHICH SECRETARY STRESSED HIS INTEREST IN MOROCCO AND HIS STRONG DESIRE TO ASSIST MOROCCO'S OIL SHALE DEVELOPMENT PROGRAM IN EVERY POSSIBLE WAY. TAKING EXTENSIVE NOTES DURING TWO HOURS FINAL SESSION THAT FREQUENTLY BECAME VERY TECHNICAL, SAADI CONCLUDED WITH HOPE THAT ENCOURAGING RESULTS OF DOE TEAM'S VISIT, SECRETARY SCHLESINGER'S CONTINUING INTEREST IN HELPING MOROCCO TO EXPLOIT ITS OIL SHALE, AND ARRIVAL OF AID TEAM IN SEPTEMBER WOULD BRING ABOUT ACTIVE PROGRAM TO SUPPORT HIS DESIRE FOR JOINT COOPERATION IN MOROCCAN ENERGY DEVELOPMENT.

11. DOE TEAM COMMENT. TEAM BELIEVES THAT IN LIGHT OF THE POTENTIAL ADVANTAGES TO THE DEVELOPMENT OF MOROCCAN TECHNOLOGY, THAT THERE ARE GOOD POSSIBILITIES FOR CERTAIN ADVANTAGES TO THE ACCELERATION OF TECHNOLOGY DEVELOPMENT IN THE US. THESE ADVANTAGES COULD ARRIVE FROM AN APPARENT ABILITY TO CONSTRUCT RETORTS AND PERFORM ENGINEERING EXPERIMENTS MORE QUICKLY IN MOROCCO THAN HAS BEEN POSSIBLE IN THE US. APPROPRIATE COOPERATIVE WORK MIGHT HAVE THE ADVANTAGE OF TRANSFER OF TECHNOLOGY DEVELOPED IN MOROCCO TO THE US. THESE ISSUES AND OTHERS WILL BE REPORTED AND DISCUSSED IN THE DETAILED TRIP REPORT TO FOLLOW WHICH TEAM WILL PREPARE IN US.

12. EMBASSY COMMENT. VISIT WAS UNQUALIFIED SUCCESS. TECHNICAL EXPERTISE AND JUDGMENTS OF TEAM MEMBERS IMPRESSED MOROCCANS, AS EVIDENCED BY MASSIVE NOTE-TAKING THROUGHOUT WEEK. DR. DECORA'S CAREFULLY DELIMITED OFFERS FOR FUTURE LIMITED OFFICIAL USE

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COOPERATION REMAINED WELL WITHIN TECHNICAL MANDATE OF TEAM, BUT WERE NOT LOST ON OFFICIALS AS SINCERE EFFORT TO PROMOTE FURTHER COOPERATION AT THIS LEVEL.

13. WE WOULD EXPECT GOM TO BEGIN DEFINING TERMS OF REFERENCE FOR A FEASIBILITY STUDY IN SUPPORT OF PILOT PROJECT WHICH TEAM RECOMMENDED FOR TAMHADIT DEPOSIT, AND WE WOULD NOT BE SURPRISED IF FUNDING OF SUCH A STUDY WERE TO BECOME A SUBJECT FOR DISCUSSION AT TIME OF AID TEAM'S VISIT IN SEPTEMBER. AS A RESULT, WE BELIEVE DOE AND AID MAY WISH TO REVIEW SUCH A PROPOSAL DURING INTERVENING PERIOD, SO THAT APPROPRIATE USG RESPONSE CAN BE FORTHCOMING IN SEPTEMBER IF GOM REQUESTS FUNDING FOR SUCH A STUDY. EMBASSY CONTINUES TO BELIEVE THAT HELPFUL USG RESPONSES IN AREAS OF HIGH GOM PRIORITY SUCH AS ENERGY SECTOR CAN PAY OFF SUBSTANTIAL POLITICAL, TECHNOLOGICAL AND COMMERCIAL DIVIDENDS TO THE US.
ANDERSON

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Message Attributes

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Draft Date: 07 jul 1978
Decaption Date: 01 jan 1960
Decaption Note:
Disposition Action: RELEASED
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Disposition Case Number: n/a
Disposition Comment: 25 YEAR REVIEW
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Disposition History: n/a
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Review Withdrawn Fields: n/a
SAS ID: 2086264
Secure: OPEN
Status: NATIVE
Subject: VISOT OF DOE OIL SHALE TEAM
TAGS: TECH, EMIN, ETRD, MO, DOE
To: STATE COM
Type: TE
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